

In re Application of:  
Short *et al.*  
Application No.: 09/880,729  
Filed: June 12, 2002  
Page 3



PATENT  
ATTY. DOCKET NO.: DIVER1110-4

**REMARKS:**

Applicants have amended the specification to amend a typographical error therein, the addition of a previously omitted alanine residue. The addition of the residue is supported in the patent to which priority has been claimed, U.S. Patent No. 6,245,547. The primer sequence was properly set forth in the original filing of U.S. Patent No. 6,245,547 and in the Sequence Listing at SEQ ID NO: 3. Additionally, the primer sequence is properly set forth in the patents to which U.S. Patent No. 6,245,547 claims priority, U.S. Patent Nos. 6,008,032 and 5,962,258. As such, no new matter has been added to the specification.

If the Examiner would like to discuss any of the issues raised in the Office Action, Applicant's representative can be reached at (858) 677-1456. Please charge any additional fees, or make any credits, to Deposit Account No. 50-1355.

Respectfully submitted,

Date: February 27, 2002

A handwritten signature in cursive script that reads "Lisa A. Haile".

Lisa A. Haile, Ph.D.  
Reg. No. 38,347  
Telephone: (858) 677-1456  
Facsimile: (858) 677-1465

GRAY CARY WARE & FREIDENRICH LLP  
4365 Executive Drive, Suite 1100  
San Diego, California 92121-2133  
USPTO Customer Number 28213

**BEST AVAILABLE COPY**

In re Application of:  
Short *et al.*  
Application No.: 09/880,729  
Filed: June 12, 2002  
Version with Markings - Page 1



PATENT  
ATTY. DOCKET NO.: DIVER1110-4

**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

The paragraph at page 72, line 5 has been amended as follows:

-- A *T. maritima* genomic library was constructed in the Lambda ZapII® cloning vector (Stratagene Cloning Systems), and mass excision was performed according to the manufacturers protocol to yield a gene library in the pBluescript cloning vector. The pBluescript library was screened in SOLR *E. Coli* cells (Stratagene) for CMCase activity and a positive clone was identified and isolated. This clone was used to inoculate an overnight culture of Luria Broth liquid medium as per Ausubel, F. M., et al., Short Protocols in Molecular Biology, 2d Ed., Harvard Medical School (1992). The plasmid DNA was isolated from the overnight culture using an alkaline lysis mini-prep protocol as per Maniatis, T., et al., Molecular Cloning, Cold Spring Harbor Press, New York (1982). Mini-prep DNA was then used to transform competent *E. coli* cells, XL1 blue (Stratagene) according to the manufacturer's protocol. A single clone was then used to innoculate a 100 ml overnight culture of Luria Broth liquid medium and plasmid DNA was isolated from this overnight using midi-prep procedure according to the manufacturer's protocol (Qiagen). The midi-prep plasmid DNA was partially sequenced with an ABI 377 and a putative open reading frame was idnetified within the sequenced region. The sequence information was used in the generation of primer sequences which were subsequently used to PCR amplify the target gene encoding the CMCase activity. The primer sequences used were as follows:

5' TTATTGCGCCGCTTAAGGAGGAAAAATTATGGGTGTTGATCCTTTTGAA 3'  
(SEQ. ID NO: 3) and

5' TTATTGGATCCGAAGGTTGAAACCACGCCATCT 3' (SEQ. ID NO: 4). --

**BEST AVAILABLE COPY**